

What is claimed is:

1. A sample manufacturing device, comprising:

a sample stage to which an original sample is fixed;

a focused ion beam irradiation system for irradiating a focused ion beam from a vertical direction to a specified location on the original sample fixed to the sample stage;

and a side entry stage, arranged diagonally above the sample stage, for inserting a sample stage for specified observation in a diagonal direction with respect to the vertical direction, and supporting the inserted sample holder for observation so as to be capable of movement in the diagonal direction, wherein

a test piece taken out from the specified location of the original sample is fixed to a tip section of the sample holder for specified observation supported on the side entry stage.

2. The sample manufacturing device of claim 1, wherein the side entry stage has the sample holder for specified observation held so that a tip of the sample holder for specified observation is positioned in a space formed by removing the original sample from on the sample stage, and is further provided with a manipulator attached to a tip of the sample holder for specified observation held on the side entry stage for removing the test piece from a specified place on the original sample.

3. The sample manufacturing device of claim 2, wherein the test piece attached to the tip section of the sample holder for specified observation is irradiated by an ion beam from the focused ion beam irradiation system in the space.

4. The sample manufacturing device of claim 1, wherein

the sample holder for specified observation is provided with a needle on a tip,
and

the side entry stage moves the sample holder for specified observation three-dimensionally to cause the tip of the needle to come into contact with or approach a specified location of the original sample.

5. The sample manufacturing device of claim 4, wherein the test piece attached to the tip of a needle of the sample holder for specified observation is irradiated by an ion beam from the focused ion beam irradiation system.

6. The sample processing method of claim 1, wherein the focused ion beam irradiation system comprises a lens barrel provided with first and second irradiation systems, the lens barrel being attached to a sample chamber housing the sample stage, and is further provided with a lens barrel internal entry stage, attached to the lens barrel at an outer side of the sample chamber, into which the sample holder for specified observation is inserted,

the first irradiation system irradiating an ion beam to a specified place on the original sample fixed to the sample stage, and the second irradiation system irradiating an ion beam to the test piece fixed to a tip of the sample holder for specified observation inserted from the lens barrel internal entry stage.